Holiday Travel Vehicles

Use Case Diagram – Activity Diagram – Class Diagram – Sequence Diagram

[Pick the date]

Problem Statement

General Problem Statement

A new vehicle arrives at Holiday TravelVehicles.

A new vehicle record is createdIncluded in the new vehicle record are a vehicle serial number, name, model, year, manufacturer, and base cost.

"Holiday Travel Vehicles sells new recreational vehicles and travel trailers.

When a new vehicle arrives at Holiday Travel Vehicles, a new vehicle record is created.

Included in the new vehicle record are a vehicle serial number, name, model, year, manufacturer, and base cost.

Customers are assigned a customer ID when they make their first purchase from Holiday Travel Vehicles. Name, address, and phone number are recorded for the customer.

The trade-in vehicle is described by a serial number, make, model, and year.

Dealer installed options are described by an option code, description, and price.

Each invoice will list only one customer and one new vehicle.

A person does not become a customer until he will purchase a vehicle.

Over time, a customer may purchase a number of vehicles from Holiday Travel Vehicles.

Every invoice must be filled out by only one salesperson.

A new salesperson may not have sold any vehicle, but an experienced salesperson has probably sold many vehicles.

A customer may trade-in no more than one vehicle on the purchase of a new vehicle.

The trade-in vehicle may be sold to another customer, who later trades it in on another one new vehicle."

A customer can search the Holiday Travel Vehicles catalogue online.

The salespeople will have a PDA to access the system using a wireless communication.

Functional requirements:

Sales person:

- Login to the system.
- Add new vehicle record.
- Negotiate with the customer on a vehicle price and options.

- Create invoice for a vehicle contains vehicle information, customer information, and options if exists.

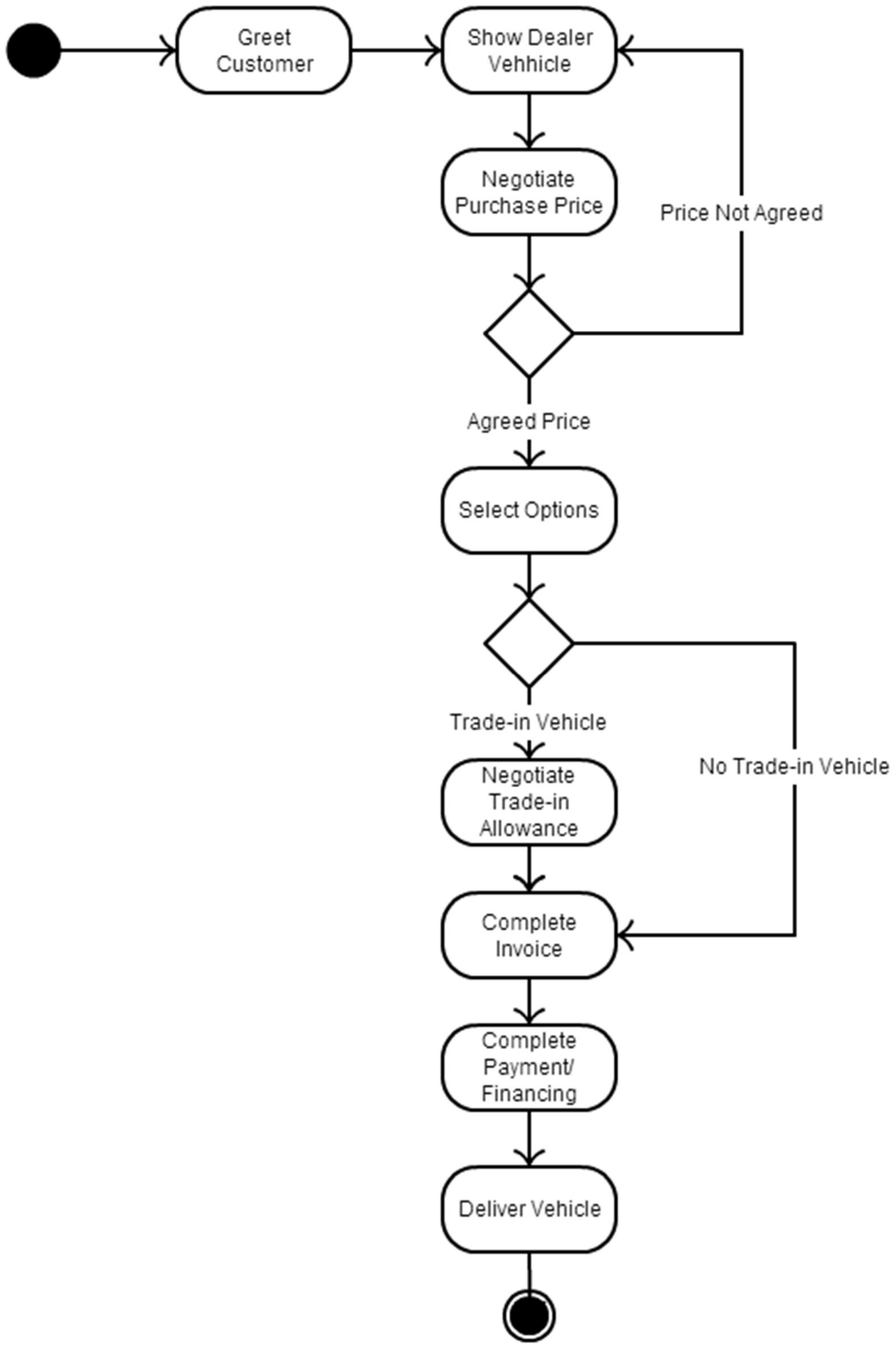
Customer:

- Login to the system.
- Search for a vehicle by keyword.
- Negotiate a sales person for a specific vehicle. Price and options.

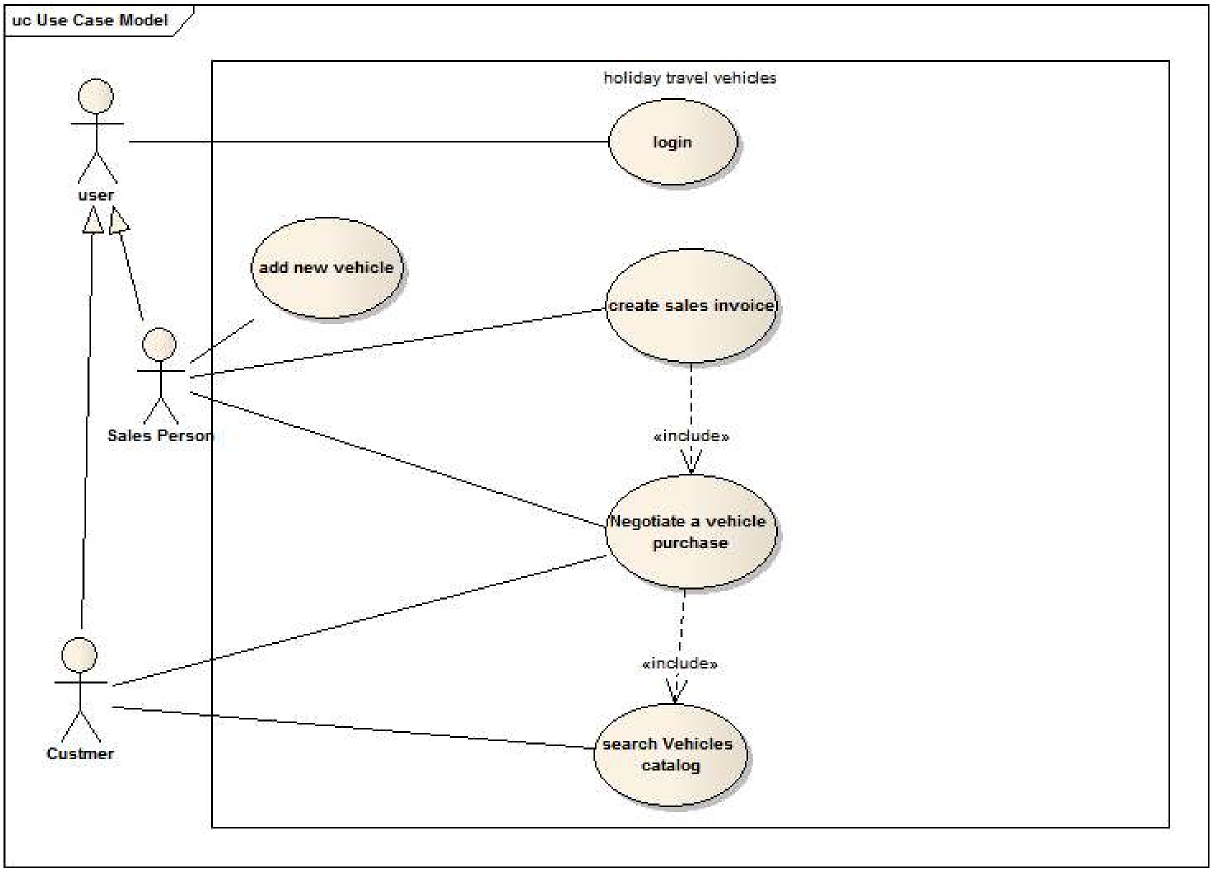
Non-functional Requirements

- System should be user friendly.
- System should be very quick in processing.
- System should be secure against hacking.

Activity Diagram:



Use Case Diagram



Use case name: login	Use case Id: 1
Stake holders: user	
Description: this use case main goal is to login to system.	
Precondition: user is not logged in.	
Post condition: user is logged in.	
Steps: 1. user enters his username and password. 2. system checks username and password validity. 3.if user is exists then system redirect user to his main home page. Else if username and password are invalid then system display error message to user.	
Priority: High	

Use case name: add new vehicle	Use case Id: 2
Stake holders: sales person	

Description: this use case main goal is to add new vehicle in database.
Precondition: sales person is logged in.
Post condition: new vehicle has been added.
Steps: 1. sales person enters vehicle information(serial number, name, model, year, manufacturer, base cost, make) 2. system adds vehicle to database. 3. System displays success message.
Priority: High

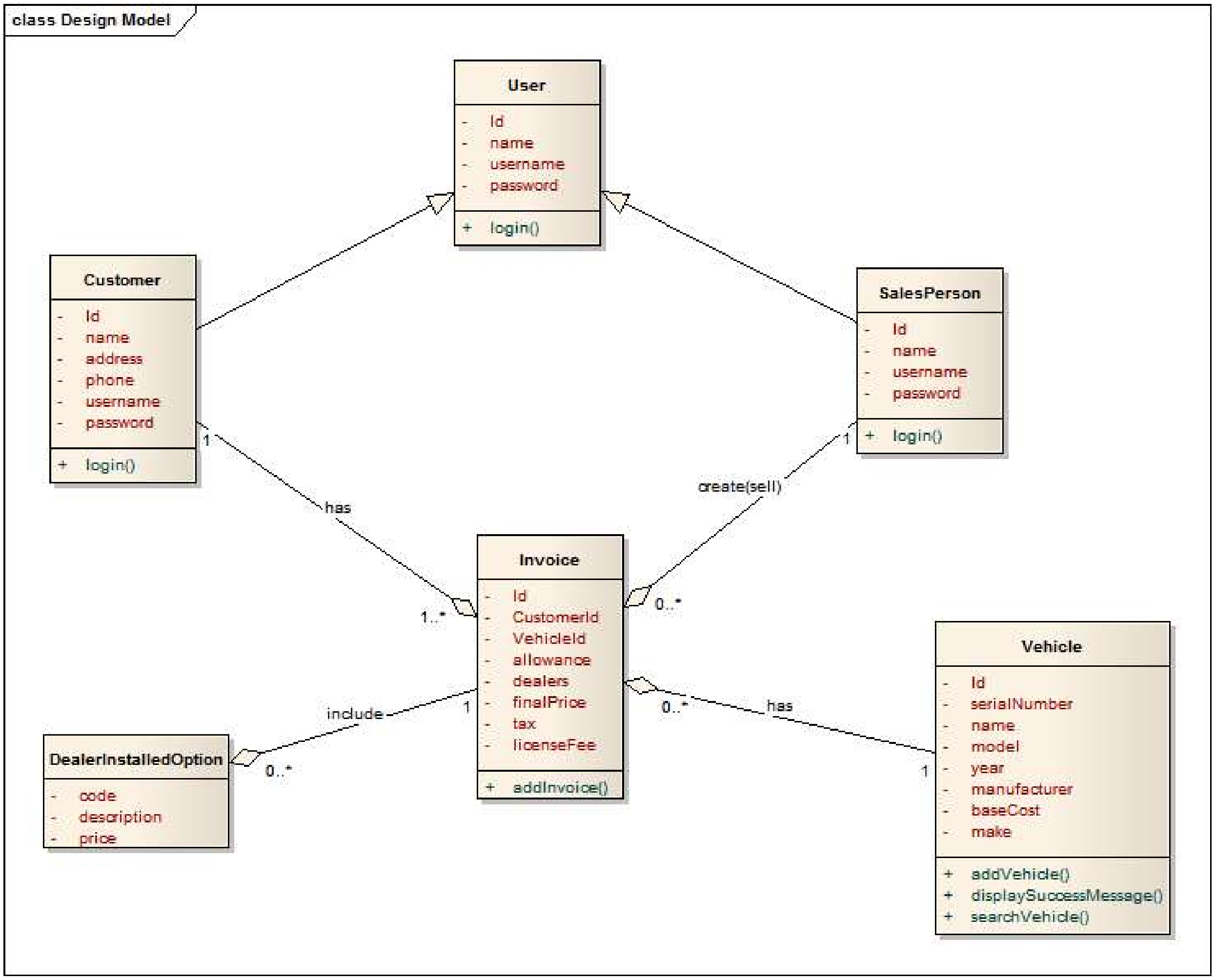
Use case name: search vehicles catalog	Use case Id: 3
Stake holders: customer	
Description: this use case main goal is to search vehicles .	
Precondition: customer is logged in.	
Post condition: search result is shown.	
Steps: 1. Customer enters a keyword. 2. System searches in database of vehicles by keyword. 3. System displays matching results.	
Priority: High	

Use case name: Negotiate a vehicle purchase	Use case Id: 4
Stake holders: customer, sales person.	
Description: this use case main goal is to negotiate a vehicle.	
Precondition: a customer searches for a suitable vehicle.	
Post condition: negotiation done.	
Steps: 1. customer selects a vehicle and asks for its price. 2. Customer selects the options he wants. 3. Sales person gives the price. 4. Customer and sales person negotiate in the price.	

5. If customer agree on price then asks sales person to create invoice. Else use case ends.
Priority: High

Use case name: create sales invoice	Use case Id: 5
Stake holders: sales person	
Description: this use case main goal is to create invoice to system.	
Precondition: negotiation on vehicle has been done.	
Post condition: user is logged in.	
Steps: 1. sales person enters invoice information(customer id, vehicle id, allowance, dealers, final price, tax, license fee). 2. System adds invoice to database. 3. System displays success message.	
Priority: High	

Class Diagram



class Design Model
User
- Id
- name
- username
- password
+ login()
Customer
- Id
- name
- address
- phone
- username
- password
+ login()
SalesPerson
- Id
- name
- username
- password
+ login()
Invoice
- Id
- CustomerId
- VehicleId
- allowance
- dealers
- finalPrice
- tax
- licenseFee
+ addInvoice()
Vehicle
- Id
- serialNumber
- name
- model
- year
- manufacturer
- baseCost
- make
+ addVehicle()
+ displaySuccessMessage()
+ searchVehicle()
DealerInstalledOption
- code
- description
- price
has
1
1..*
create(sell)
1
0..*
include
1
0..*
has
0..*
1

Sequence diagrams: